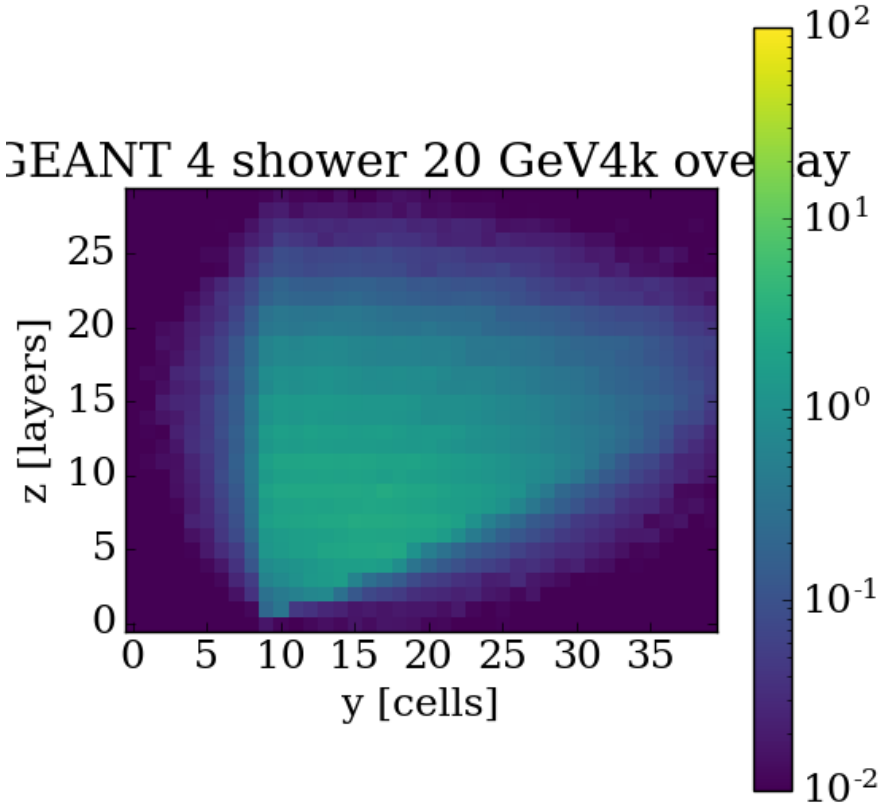
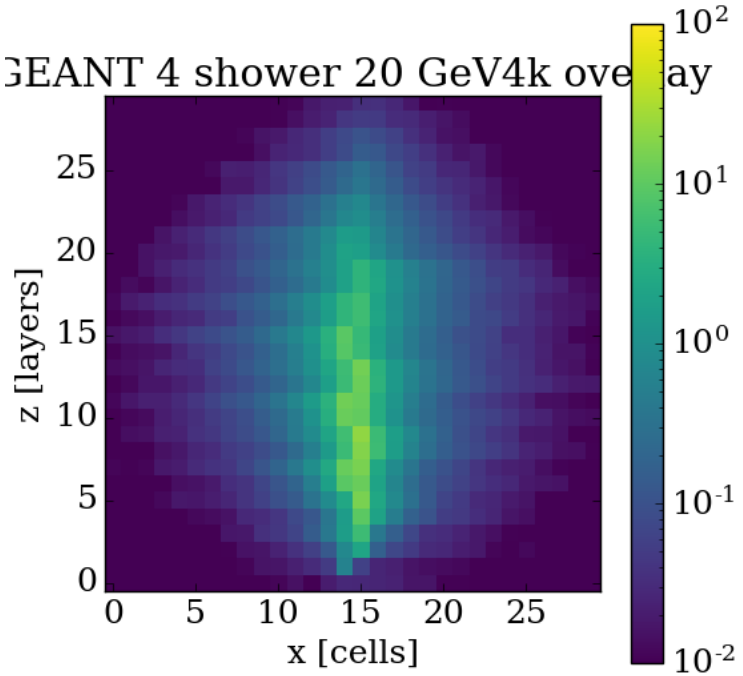
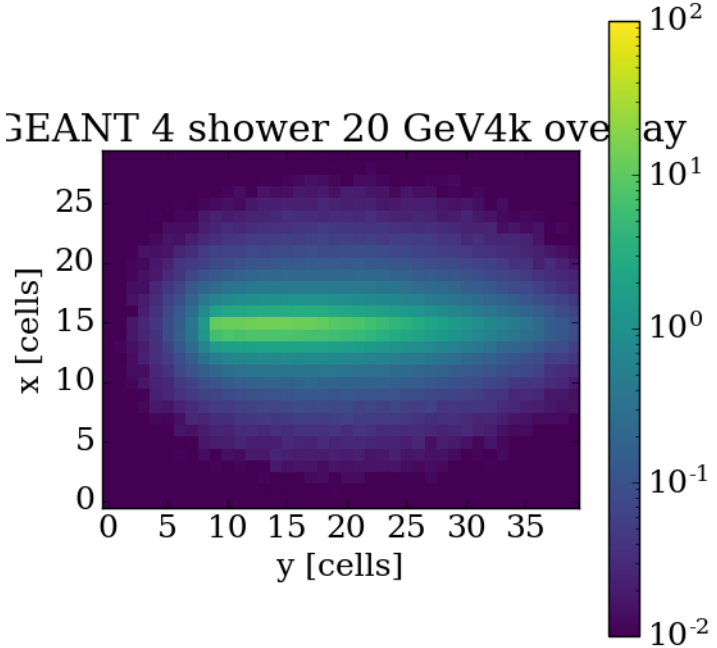
Photon Showers with angle

- **30x30x40** showers (layers, x, y) with extended y-coordinate
- Gun position is very close to ECAL: 1mm!
- Implemented corrections both x and y positions due to artifacts (due to irregularities)
- Angle is from 90deg to 30deg







Can we contain full shower ?

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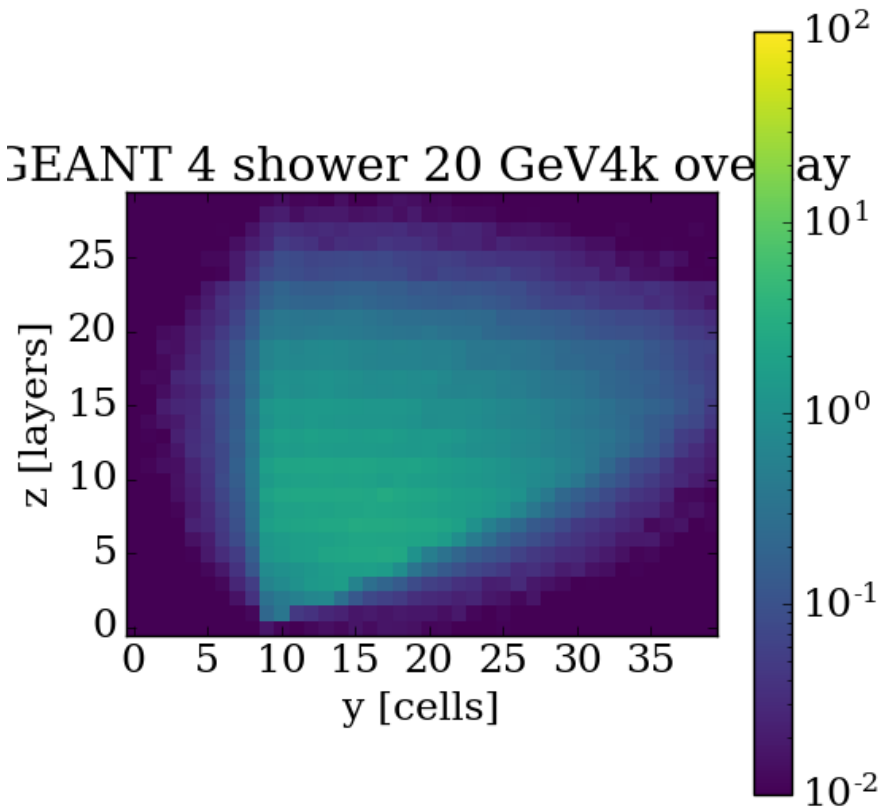
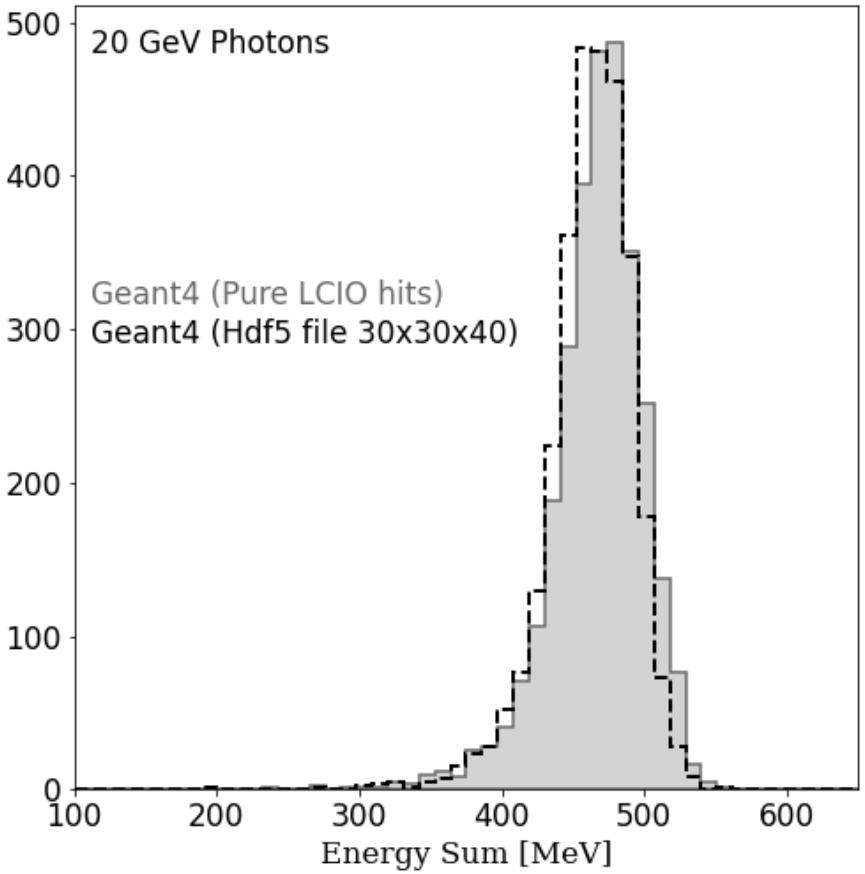
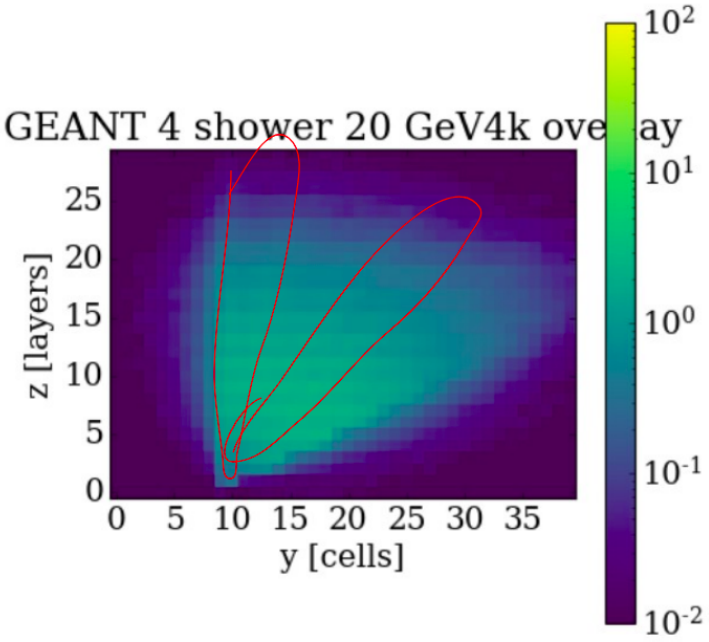


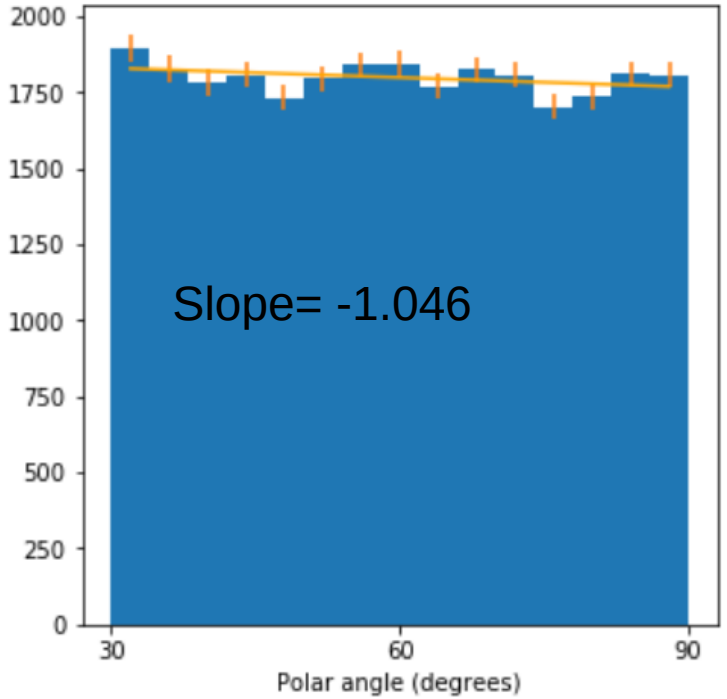


Comparison with E-sum from pure LCIO, without projecting into 30x30x40 box

Issue: Why the angle is not *fully* uniform ?



Plot angle labels
from hdf5 file




```
##
SIM.gun.distribution = 'uniform'
SIM.gun.energy = 20*GeV

##  isotropic distribution for the particle gun
##
##     use the options phiMin, phiMax, thetaMin, and thetaMax to limit the range of randomly distributed directions
##     if one of these options is not None the random distribution will be set to True and cannot be turned off!
##
SIM.gun.isotrop = False
SIM.gun.multiplicity = 1
SIM.gun.particle = "gamma"
SIM.gun.phiMax = 1.57079

## Minimal azimuthal angle for random distribution
SIM.gun.phiMin = 1.57079

##  position of the particle gun, 3 vector
SIM.gun.position = (0.0, 1810*mm, -5.0*cm)
SIM.gun.thetaMax = 1.57079
SIM.gun.thetaMin = 0.52360
```

ddsim config file in ILDConfig

Thank you